Claims

1. Pianoforte instrument comprising an action (11) with keys, comprising strings which are struck via a mechanism when the keys are actuated and are made to vibrate, comprising a sound board (20), to which the vibrations of the strings are transmitted, and comprising a device (25, 26) for delivering additional vibration energy into the sound board (20), wherein there are provided sensors (15), which directly or indirectly detect actuation of the keys of the action (11), wherein there is provided a sound-augmenting device (30), to which the measured values of the sensors (15) are supplied, wherein the sound-augmenting device (30) is equipped with units (31, 33, 34, 35) which compile data corresponding to a desired sound characteristic in dependence on the measured values of the sensors (15), and wherein the sound-augmenting device (30) supplies the sound board (20) with additional vibration energy, corresponding to the data obtained, via the delivering device (25, 26).

2. Pianoforte instrument according to claim 1, characterised in that the vibration energy that is generated externally by the sound-augmenting device (30) is delivered in real time into the sound board (20) via the delivering device (25, 26), in addition to the vibration energy entering the sound board (20) mechanically from the vibrating acoustic strings.

3. Pianoforte instrument according to claim 1 or claim 2, characterised in that the sound-augmenting device (30) comprises a tone sample memory (31) and in that tone samples are associated with the tones including the partial tones thereof from the memory (31), that correspond to the key actuations registered by the sensors (15) in the action (11) of the instrument (10).

4. Pianoforte instrument according to any one of the preceding claims, characterised in that the sound-augmenting device (30) comprises a tone modification device (34) and in that the tone modification device (34) modifies the tone data originating from the sensors (15) and from the memory (31).

5. Pianoforte instrument according to any one of the preceding claims, characterised in that there is provided a control module (35), which controls the tone modification device (34), for example via presets, regulators and/or screen-controlled software, such that individual sound design is facilitated by selectively influencing the tones.

6. Pianoforte instrument according to any one of the preceding claims, characterised in that an amplifier module (36), which amplifies the signals received from the control module (35), is provided.

7. Pianoforte instrument according to claim 6, characterised in that the signals issuing from the amplifier module (36) are supplied to the device (25, 26) for delivering vibration energy, where they are converted into mechanical vibrations and introduced into the sound board (20).

8. Pianoforte instrument according to any one of the preceding claims, characterised in that the device (25, 26) for delivering vibration energy comprises one or more driver systems.

9. Pianoforte instrument according to claim 8, characterised in that each driver system (25, 26) comprises a ring magnet, in the core of which there is arranged a coil, which is fixed to the sound board (20) and drives the sound board (20).

10. Pianoforte instrument according to either claim 8 or claim 9, characterised in that the driver magnet is adjustable in all three dimensions using specific adjustment devices, and can thus be aligned precisely with the position of the coil former fastened to the sound board (20).

11. Pianoforte instrument according to claim 10, characterised in that the adjustable driver magnet is mounted in a solid base element, which is in turn fastened to a locking element of the pianoforte instrument.

12. Method for influencing the sound of a pianoforte instrument comprising an action (11) with keys, comprising strings which are struck via a mechanism when the keys are actuated and are made to vibrate, comprising a sound board (20), to which the vibrations of the strings are transmitted, and comprising a device (25, 26) for delivering additional vibration energy into the sound board (20), characterised in that the actuation of the keys of the action (11) is directly or indirectly detected by means of sensors (15), in that the measured values of the sensors (15) are supplied to a sound-augmenting device (30), in that there are provided units (31, 33, 34, 35) which compile data corresponding to a desired characteristic sound as a function of the measured values of the sensors (15), and in that the sound-augmenting device (30) supplies the sound board (20) with additional vibration energy, corresponding to the data obtained, via the delivering device (25, 26).

Captions

Figur = Figure